UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,892	05/05/2008	Carsten Kallesoe	72323	7508

23872 7590 06/21/2011		EXAMINER
MCGLEW & TUTTLE, PC		LETTMAN, BRYAN MATTHEW
P.O. BOX 9227		
SCARBOROUGH STATION	ART UNIT	PAPER NUMBER
SCARBOROUGH, NY 10510-9227	3746	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Advisory Action **Before the Filing of an Appeal Brief**	10/597,892	KALLESOE, CARSTEN
	Examiner	Art Unit
	BRYAN LETTMAN	3746

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 02 June 2011 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

   a) ☒ The period for reply expires _3_ months from the mailing date of the final rejection.

   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

      Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because

   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ They raise the issue of new matter (see NOTE below);

   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

      NOTE: ____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☒ Applicant's reply has overcome the following rejection(s): _The 35 USC 112 rejections of claims 3 and 12_.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _8-11,13,16,17 and 25_.

   Claim(s) rejected: _1-6,12,14,15,18 and 21-24_.

   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.

12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____

13. ☒ Other: See Continuation Sheet.

/Devon C Kramer/
Supervisory Patent Examiner, Art Unit 3746

/B. L./
Examiner, Art Unit 3746

Continuation of 11. does NOT place the application in condition for allowance because: Applicant argues that Medvedev does not disclose a method of determining pump faults. Instead, Medvedev discloses a control system for a rotary blood pump." However, Medvedev is concerned with determining the problem of an incorrect pump flow and speed. Incorrect pump flow and speed are pump faults, therefore Medvedev is concerned with detecting problems with the pump. Furthermore, as explained starting in line 35 of page 7 and ending in line 23 of page 8, Medvedev also teaches the determination of four conditions which are pump faults. Accordingly, this argument is unpersuasive.

Applicant argues that "there is no detection of any fluid characteristics. Instead fluid characteristics are inferred." The fluid characteristics of the pump in Medvedev are determined by use of a known relationship between the motor current and the fluid characteristics of the pump. This relationship makes the fluid characteristics of the pump a component of the detected current and are therefore detected when the current is detected. Accordingly, this argument is unpersuasive.

Applicant argues that the "fundamental teachings of Medvedev are silent with regard to the need for determining faults during operation of a pump unit." However, as explained above, Medvedev teaches four indicated conditions of the pump that are faults. Medvedev is therefore not silent with regard to the need for determining faults, and instead teaches the importance of monitoring for pump faults. Accordingly, this argument is unpersuasive.

Applicant argues that, "[a] relationship of pump function and blood flow based on motor input power only provides an indication of likely blood flow. Such use of a relationship or approximation of blood flow is not a detection of blood flow." However, since Medvedev teaches that there is a known relationship between the motor input power and the pump flow, the detected motor power therefore provides a detected flow. Accordingly, this argument is unpersuasive.

Applicant argues "with regard to the limitation relating to 'providing a mathematical mechanical-hydraulic pump model for generating a pump comparison value' the rejection only makes reference to the exclusively electrical signal based equations (4 and 5). There is no reference to any teaching of linking of the motor value (the output of the electrical- based models) and the detected hydraulic variable of the pump. No hydraulic variable is detected, no mathematical mechanical- hydraulic pump model is provided and no hydraulic variable is linked with the motor value (the output of the electrical-based models) in a mathematical mechanical - hydraulic pump model." However, as explained starting in line 35 of page 7 and ending in line 23 of page 8, the microcontroller in Medvedev uses a detected motor value (the detected current and voltage), a detected hydraulic variable (there are various detected hydraulic variables listed, one of which is flow) to determine a mathematical mechanical-hydraulic pump model to indicates four functional conditions of the pump. Applicant further argues that there is "no predefined pump value and no comparing of the pump comparison value with the predefined pump value". However, in order for the microcontroller to determine if any of the four listed conditions exist, it must inherently compare a pump comparison value (determined by the mathematical mechanical-hydraulic pump model) with a predefined pump value. Accordingly, these arguments are unpersuasive.

Applicant argues that Medvedev is only concerned with faults in the surrounding system and not pump faults. However, as explained starting in line 35 of page 7 and ending in line 23 of page 8, Medvedev teaches the detection of several pump faults, such as pump speed (HR). If the pump speed is outside a minimum or maximum, a pump fault occurs. Accordingly, this argument is unpersuasive.

Applicant argues that Medvedev does not teach the detection of pressure. However, there is a known relationship between the flow and pump pressure drop (which is a differential pressure) (see page 5, lines 24-34), the detected pressure is therefore a component of the detected flow (which is a component of the detected current, as explained above). Accordingly, this argument is unpersuasive.

Applicant argues that Medvedev fails to teach the changing of speed to better determine the cause of a fault. Medvedev defines four conditions in page 8, one of which is pump speed. If the pump speed is high or low, it is adjusted. As the adjustment is made, the pump is re-evaluated for the four conditions. One of the other three faults, that was not detected at the fault triggering speed, might then be detected at the adjusted speed. Therefore, by changing the speed, the pump is able to better determine the cause of the original speed fault. Accordingly, this argument is unpersuasive.

Applicant argues that "[t]he present invention uses a mathematical model approach for fault detection" and Medvedev uses a signal analysis approach to provide a likely condition of the patient. However, Medvedev teaches the use of detected variables, just like Applicant, which indicate conditions of both the patient and the pump. For example, if the mathematical model (Medvedev's equations) indicates a patient's heart rate is high, it also indicates that the pump's speed is high. Accordingly, this argument is unpersuasive.

Applicant argues that Medvedev only teaches a control algorithm and not a fault detection algorithm. However, the pump control algorithm taught by Medvedev reacts to the determination of a fault. Therefore the Medvedev algorithm inherently includes a fault detection algorithm. Accordingly, this argument is unpersuasive.

Applicant argues that Medvedev fails to teach the transmission of a fault signal to the user. However, when a fault such as a high HR (pump speed) is detected, the microcontroller reduces the pump speed, thereby causing a decrease in heart rate which is transmitted to the user. Accordingly, this argument is unpersuasive.

Continuation of 13. Other: The claims would be rejected as detailed in the prior rejection.